REMARKS:

The Examiner has objected to claims 7, 8, 10-13, 16-20, 25-27, 33-34, and 36-40 but has indicated that they would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. These claims as hereby amended are believed to be in condition for allowance.

Claims 1-6, 9, 21-24, 28-32, and 41-44 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent Application Publication No. 02-188836 ("Kon") in view of U.S. Patent 6,289,055 ("Knotz"). In response, claims 1, 21, and 28 are hereby amended. Applicants respectfully contend that claims 1-6, 9, 21-24, 28-32, and 41-44 as amended are patentable over the cited art for the following reasons.

Kon's integrated circuit 6 has three external nodes (9, 10, and 11), and includes test circuitry coupled to external nodes 9, 10, and 11. Arguably, the test circuitry is configured to operate in a test mode in response to test data (test mode setting data "f") received at node 10 from an external source. Applicants can identify no indication in Kon that the test mode control signals generated by test mode decoder 16 (in response to test mode setting data "f" that have been shifted into register 15) are used by operational circuitry (in contrast with test circuitry), as alleged by the examiner. Apparently, the test mode control signals output from decoder 16 are asserted to test circuitry during a test mode (to control the test circuitry); not to operational circuitry distinct from test circuitry.

Even assuming for the purpose of argument that Kon's test circuitry is configured to assert to operational circuitry a control signal (one of the signals output from decoder 16) in response to an external control signal (test mode permission signal "d") received at node 9 from an external source, there is no teaching or suggestion that Kon's integrated circuit includes test circuitry (coupled to an external node) configured to operate in a test mode in response to test data received at the external node from an external source, and to assert to operational circuitry a control signal in response to an external control signal received at the external node (i.e., the same external node at which the test data are received), where the control signal has a state determined by the external control signal.

None of the test mode control signals output from Kon's decoder circuit 16 has a state determined by an external control signal (e.g., test mode permission signal "d") or a modulated input signal, where the external control signal or modulated input signal is distinct from test data (i.e., Kon's test mode setting data "f"). Kon fails to teach or suggest asserting a control signal in response to an external control signal received at an external node, said control signal having a state determined by the external control signal (as distinct from test data received at the external node) as recited in claims 1 and 28. Kon also fails to teach or suggest extracting test data from an amplitude-modulated input signal asserted to a single node and generating a control signal in response to the input signal such that the control signal has a state determined by the input signal but not by the test data, as recited in claim 21. The state of each test mode control signal output from Kon's decoder circuit 16 is determined by Kon's test mode setting data "f" (received at node 10); not by Kon's test mode permission signal "d" (received at node 9). Apparently, Kon's test mode permission signal "d" merely controls shift register 15 (to cause test data to be or not to be shifted into register 15) and decoder 16 (to cause decoder 16 to decode or not to decode test data in register 15), without determining the state of any of the test mode control signals output from decoder 16.

Nor is any test mode control signal output from Kon's decoder 16 a binary signal whose state is determined by the state of an external control signal (in contrast with test data) as recited in claim 3. As explained above, the state of each of Kon's test mode control signals (output from Kon's decoder 16) is determined by test data "f" that have been shifted into register 15; not by the state (e.g., the level) of test mode permission signal "d" received at node 9.

Knotz discloses transmitting a modulated signal to an integrated circuit and employing circuitry in the integrated circuit to extract at least two signals from the modulated signal. However, Knotz includes no teaching or suggestion that such a modulated signal should be asserted to "test circuitry" as recited, or that both "test data" and a control signal (of the type recited in claim 1, 3, 21, or 28) should be extracted from such a modulated signal. Specifically, Knotz fails to teach or suggest assertion of a control

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signal having a state determined by an external control signal or a modulated input signal (where the external control signal or modulated input signal is distinct from test data) as recited in claims 1, 21, and 28.

Because neither Kon nor Knotz teaches or suggests assertion of a control signal having a state determined by an external control signal or a modulated input signal (where the external control signal or modulated input signal is distinct from test data) as recited in claims 1, 21, and 28, these claims (and all claims depending directly or indirectly therefrom) are patentable over Kon and Knotz, read individually or in combination. Even if Kon's circuit were somehow modified so that test mode setting data "f" and test mode permission signal "d" were determined by a single signal received at a single node (e.g., node 9 or 10), and to include circuitry for extracting both the test mode setting data and test mode permission signal from the single signal, the so-modified Kon circuit would not:

assert a control signal in response to an external control signal received at the single node, said control signal having a state determined by the external control signal (as distinct from test data received at the single node) as recited in claims 1 and 28, or

extract test data from an amplitude-modulated input signal asserted to the single node and generate a control signal in response to the input signal such that the control signal has a state determined by the input signal but not by the test data, as recited in claim 21, or

extract test data from an amplitude-modulated input signal asserted to the single node, and assert a binary control signal in response to an external control signal determined by the input signal, said binary control signal having a state determined by the external control signal as recited in claim 3.

Claims 14, 15, and 35 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Kon in view of Knotz and further in view of U.S. Patent 5,557,571 ("Kato"). In response, claims 1 and 28 are amended. Applicants contend that claims 14, 15, and 35, as dependent on amended claims 1 and 28, are patentable over the cited art for the following reasons.

For the reasons set forth above, amended claims 1 and 28 (and thus claims 14, 15,

and 35) are patentable over Kon and Knotz, read individually or in combination. Kato fails to teach or suggest asserting a control signal in response to an external control signal received at an external node, said control signal having a state determined by the external control signal (as distinct from test data received at the external node), as recited in claims 1 and 28. Thus, claims 1 and 28 (and all claims depending directly or indirectly therefrom) are patentable over Kato, Kon, and Knotz, read individually or in combination.

Respectfully submitted,

GIRARD & EQUITZ LLP

Dated: 10/28/03   By: _Alfred a Equitz_
                             Alfred A. Equitz
                             Reg. No. 30,922

Attorneys for Applicant(s)

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